

Attorney's Docket No.: 06666-060001

REMARKS

Upon entry of the above amendments, claims 1-19 will be pending, with claims 1, 16, and 17 being independent. Claims 1, 5-6, and 11-17 have been amended. Dependent claims 18 and 19 are newly presented. No new matter has been added. In view of the amendments and remarks, all of the claims should be allowed.

Claim Objections

Claims 1-17 are objected to for various alleged informalities. These objections are traversed.

The Transmission System

Regarding claim 1, in line 25, the office action suggests replacing "the transmissions system" with "the digital transmission system." A similar suggestion was made for claim 16.

The claims have been amended in accordance with the suggestions proposed in the office action. Thus, these objections are moot and should be withdrawn.

Updated First and Second Sequences of Soft Information

Regarding claim 1, "updated first and second sequences of soft information" allegedly lacks definite antecedent basis.

The claims have been amended such that the phrase "updated first and second sequences of soft information" no longer appears in the claim. Thus, this objection is moot and should be withdrawn.

Attorney's Docket No.: 06666-060001

Backward Estimates

Regarding claim 1, in line 22, "backward estimates" allegedly should be replaced with "backward channel parameter estimates." Similar suggestions were made for claims 16 and 17.

The claims have been amended in accordance with the suggestions proposed in the office action. Thus, these objections are moot and should be withdrawn.

The Inputs and Outputs

Regarding claim 5, in lines 2-3, "the inputs and outputs defined by Trellis state transition" allegedly lacks antecedent basis.

As amended, the definite article "the" has been removed. Thus, this objection should be withdrawn.

Said Soft Output

Regarding claim 6, in lines 1-2, "said soft output" allegedly lacks antecedent basis. This rejection is incorrect. Claim 6 depends on claim 5, which recites:

"The system of claim 4, wherein each of said min/sum operators computes soft output."

Because claim 5 recites the phrase "soft output," there is clear antecedent basis in claim 6. Thus, this rejection must be withdrawn.

Each Trellis State

Regarding claims 11 -13, in line 3 of each claim, "each Trellis state" allegedly lacks antecedent basis.

As amended, the phrase "each Trellis state" is removed from the claims. Thus, these objections are moot and should be withdrawn.

Attorney's Docket No.: 06666-060001

Updated Soft Information

Regarding claim 17, in line 6, "updated soft information" allegedly lacks antecedent basis. This phrase has been removed from the claims. Thus, this objection is moot and should be withdrawn.

Said Coded Symbols

Regarding claim 17, in line 31, "said coded symbols" should allegedly be replaced by "said plurality of coded signals."

The claims have been amended in accordance with the suggestion proposed in the office action. Thus, this objection is moot and should be withdrawn.

Rejections under 35 USC § 112

Claims 1-17 are rejected under 35 U.S.C. section 112, second paragraph, as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These rejections are traversed.

Receiving an Observed Digital Signal

Regarding claims 1 and 16, the claims are rejected for allegedly failing to distinctly claim the subject matter of the invention as described in the specification and for allegedly being incomplete for omitting essential structural cooperative relationships of elements, such as an omission allegedly amounting to a gap between the necessary structural connections pursuant to MPEP section 2172.01.

Allegedly, as claimed, the receiver front end, and the forward and backward recursion elements both receive an observed digital signal; however, the invention as disclosed in the specification receives an observed digital signal at the

Attorney's Docket No.: 06666-060001

receiver front end and subsequently passes a received observed digital signal to the remaining elements of the system. Allegedly, therefore, the claim is rejected because it allegedly fails to distinctly claim the appropriate structural relationships of the system.

Without conceding the propriety of the rejection and the related assertions, claims 1 and 16 have been amended such that a receiver front-end is configured to receive a digital signal as an observed digital signal. For example, amended claim 1 recites, in part:

a receiver front-end configured to receive a digital signal in the digital transmission system as an observed digital signal.

These amendments overcome this rejection; thus, the rejection should be withdrawn.

#### Channel Parameters

Regarding claims 1, 16, and 17, which include the language "channel parameters," allegedly, one is unable to definitively determine if the "channel parameters" are the same in both instances or exclusive of one another. Allegedly, the claim is therefore indefinite because one skilled in the art is unable to determine if a single set of "channel parameters" is determined by both the first and second sequences of soft information or if the first and second sequences of soft information are used to determine respectively a first and a second set of channel parameters by the forward and backward channel estimators, respectively.

Claims 1, 16, and 17 have been amended to clarify the subject matter. As amended, the claims include clear references to versions of the term "channel parameters." For example, claim 1 recites:

Attorney's Docket No.:06666-060001

said at least one forward channel estimator operating to  
estimate forward channel parameters ...[;]

said at least one backward channel estimator operating to  
estimate backward channel parameters ...[;] and

a combiner configured to compute a transitional information  
that binds the forward channel parameter estimates with the  
backward channel parameter estimates

Therefore, this rejection should be withdrawn.

#### Conclusion

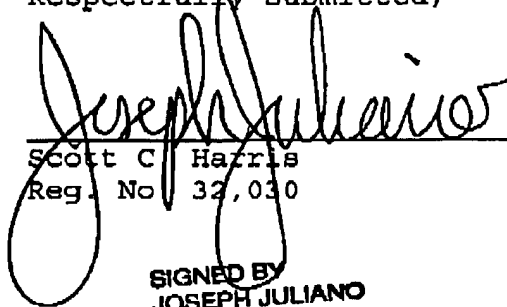
In view of the above amendments and remarks, all of the  
claims are in condition for allowance. A formal notice to that  
effect is respectfully requested.

It is believed that all of the pending claims have been  
addressed. However, the absence of a reply to a specific  
rejection, issue or comment does not signify agreement with or  
concession of that rejection, issue or comment. In addition,  
because the arguments made above may not be exhaustive, there  
may be reasons for patentability of any or all pending claims  
(or other claims) that have not been expressed. Finally,  
nothing in this paper should be construed as an intent to  
concede any issue with regard to any claim, except as  
specifically stated in this paper, and the amendment of any  
claim does not necessarily signify concession of unpatentability  
of the claim prior to its amendment.

Attorney's Docket No.: 06666-060001

Applicant asks that all claims be allowed. Please apply  
any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: 12/2/05  
\_\_\_\_\_  
Scott C. Harris  
Reg. No. 32,030

Fish & Richardson P.C.  
PTO Customer Number: 20985  
12390 El Camino Real  
San Diego, CA 92130  
Telephone: (858) 678-5070  
Facsimile: (858) 678-5099  
10573969.2.doc

SIGNED BY  
JOSEPH JULIANO  
REG. NO. 54,780